(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 22 April 2004 (22.04.2004)

PCT

(10) International Publication Number WO 2004/033639 A2

(51) International Patent Classification7:

C12N

(21) International Application Number:

PCT/US2003/031598

(22) International Filing Date: 6 October 2003 (06.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/416,716

7 October 2002 (07.10.2002) US

(71) Applicant (for all designated States except US): UNIVER-SITY OF CHICAGO [US/US]; 5640 South Ellis Avenue, Suite 405, Chicago, IL 60637 (US).

- (71) Applicant and
- (72) Inventor: ZHOU, Gouying [CN/US]; 5255 S. Blackstone Avenue, Apt. 2S, Chicago, IL 60637 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ROIZMAN, Bernard [US/US]; 5555 South Everett, Chicago, IL 60637 (US). YE, Guo, Jie [—/US]; 10912 Creekbridge Place, San Diego, CA 92128 (US).

(74) Agent: WRONA, Thomas, J.; Marshall, Gerstein & Borun LLP, 6300 Sears Tower, 233 South Wacker Drive, Chicago, IL 60606 (US).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TARGETING OF HERPES SIMPLEX VIRUS TO SPECIFIC RECEPTORS

(57) Abstract: The invention relates to engineered Herpes simplex virus (HSV) particles that are targeted to one or more specific receptors. Also, recombinant vectors for producing such HSV particles. By reducing the affinity of HSV for its natural receptor(s) and increasing the affinity for a selected receptor, the HSV particles of the invention may be used for targeting cells that express the selected receptor. The ability to selectively target cells renders the HSV particles particularly useful in selectively killing the selected receptor-bearing cells (such as tumor cells), imaging cells bearing the selected receptor, and providing gene replacement therapy to cells bearing the selected receptor.

BEST AVAILABLE COPY

